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Environmental Decommissioning: What Is It and Why Does the NIH Need It?



The NIH campus landscape is constantly changing. Lab and office renovations occur frequently in response to changing research needs and modernization. The nature of work performed by the NIH means extra precaution must be used when disturbing the spaces where hazardous substances were used or stored. The NIH Environmental Decommissioning program ensures that all spaces are properly decontaminated before being renovated or demolished, as required by local, state and federal regulations. This program also mitigates short- and long-term risks to human health and the environment from materials removed during demolition activities and after disposal.

The Environmental Decommissioning Program is operated within the Office of Research Facilities by the Division of Environmental Protection (DEP) in collaboration with the Office of Research Services (ORS) Divisions of Radiation Safety (DRS) and Occupational Health and Safety (DOHS). Decommissioning most frequently addresses building materials, such as asbestos and lead-based paint, and hazardous substances that were used or stored at the NIH, such as mercury and radioactive material. This program establishes the process for removing environmental contamination.

The overall process for decommissioning is routinely accomplished in four steps:

1. **Preliminary Assessment of Contaminants:** A historical investigation of the targeted area is performed to identify potential hazards that may exist. The investigation probes past and current research activity, records of hazardous substances that were used or stored, spill records from the NIH Fire Department, and facility drawings and documents that reference hazardous items in the original construction materials.
2. **Surveys for Hazardous Substances:** Physical surveys are conducted to identify facility-intrinsic and research-related contaminants that may be present. Sampling is conducted in a variety of different methods, such as air sampling using a very sensitive atomic absorption unit that is highly specific for mercury vapor. Sampling may also be conducted for polychlorinated biphenyl (PCB) compounds, other toxic heavy metals and perchloric acid.
3. **Decontamination of Hazardous Substances:** During this phase, identified hazards are abated/cleaned up. Contamination can include radioactive materials, asbestos-containing materials, and a variety of chemicals including mercury. Since the work requires displacement of staff and normal work activities, it is usually accomplished prior to renovations. Occupational and environmental monitoring continues throughout the entire process as the extent of contamination is not always revealed until cabinetry and other layers of building materials are moved. Cleanup activities may require installation of containment systems with air filtering to preclude transport of hazards to adjacent areas. The ORS Division of Occupational Health and Safety provides oversight to ensure the safety of NIH staff and visitors. When radioactive materials have been used, the Division of Radiation Safety conducts extensive monitoring to verify the space is clear of radiation and ready for use.
4. **Post-Decontamination Clearance Survey:** During the final phase, the effectiveness of the decontamination is verified. Disposable materials are measured to determine appropriate waste categories. Remaining interior structures around which renovations occur are tested to ensure their cleanliness.

Decommissioning projects are managed by the DEP Remediation Team and led by Mr. Jacob Deal, whom you can learn more about in our ["Staff Spotlight"](#) article. Notable decommissioning projects at the NIH include Buildings 29, 34, 7 and 10 E-Wing. The Remediation team also completed nearly 100 small to medium-scale decommissioning projects in 2018. You can find more information on the DEP Decommissioning Program on the [NEMS website](#). Additionally, you can directly contact the Remediation Team by sending an email to DEPDecom@mail.nih.gov.

TAKE ACTION

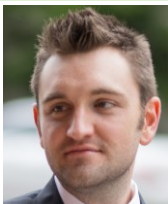


How can NIH Staff Help the Environmental Decommissioning program?

Decommissioning is a necessary process to protect both human health and the environment. There are many ways that NIH staff can assist the Environmental Decommissioning Program. Read the full article to learn how you can help!

[LEARN MORE](#)

STAFF SPOTLIGHT



Meet Jake Deal, the NIH Environmental Decommissioning Project Officer

Jake Deal manages the NIH Environmental Decommissioning Program, which includes monitoring decommissioning projects and leading the NIH Remediation Team. Click the link below to learn more about Jake and his work at the NIH.

[LEARN MORE](#)

NEMS TRAINING

Did you know? The NIH completed approximately 100 decommissioning projects in 2018, removing contaminants such as mercury, asbestos, silver and lead. To learn more about environmental decommissioning at the NIH, please visit the [NEMS Training webpage](#) to view a short (20 minute) NIH environmental awareness training video.